

What is claimed

1. A wet-laid nonwoven reinforcing mat, comprising:
  - (a.) a base web including about 10 to about 80 percent by weight glass fibers, and about 20 to about 90 percent by weight polyethylene terephthalate fibers;
  - (b) polyvinyl alcohol in an amount of about 5 to about 35 percent of the combined weight of the glass fibers and the polyethylene terephthalate fibers; and
  - (c.) a secondary binder in an amount of about 10 to about 30 percent of the combined weight of said glass fibers, polyethylene terephthalate fibers and polyvinyl alcohol.
- 10 2. The reinforcing mat of claim 1 wherein said glass fibers are selected from a group consisting of E glass fibers, C glass fibers, A glass fibers and any mixtures thereof.
- 15 3. The reinforcing mat of claim 1 wherein said glass fibers have a diameter of from about 6 to about 16 microns and a length of from about 4 to about 20 25 mm.
4. The reinforcing mat of claim 1 wherein said polyethylene terephthalate fibers have a diameter of from about 6 to about 16 microns and a length of from about 4 to about 25 mm.
- 25 5. The reinforcing mat of claim 1 wherein said polyethylene terephthalate fibers have a melting point above about 250°C.
6. The reinforcing mat of claim 5 wherein said polyethylene terephthalate fibers are aramid fibers.

8. The reinforcing mat of claim 1 wherein said polyvinyl alcohol is in a form of a fiber, a powder or both.

5       9. The reinforcing mat of claim 1 wherein said polyvinyl alcohol is in a fiber form having a diameter of about 6 to about 20 microns and a length of about 4 to about 12 mm.

10      10. The reinforcing mat of claim 1 wherein said polyvinyl alcohol is in a powder form having a particle size of from about 50 to about 250 microns.

11. The reinforcing mat of claim 1 wherein said secondary binder is a water based emulsion or solution type binder.

15      12. The reinforcing mat of claim 1 wherein said secondary binder is selected from a group consisting of polyvinyl alcohol, acrylic, ethylene vinyl acetate and any mixtures thereof.

13. The reinforcing mat of claim 1 wherein said base web includes glass fibers in an amount of about 25 to about 40 percent by weight of the fibers.

20      14. The reinforcing mat of claim 1 wherein said base web includes polyethylene terephthalate fibers in an amount of about 60 to about 75 percent by weight of the fibers.

25      15. The reinforcing mat of claim 1 wherein said polyvinyl alcohol is provided in an amount of about 10 to about 20 percent of the total weight of the glass fibers and the polyethylene terephthalate fibers.

30      16. The reinforcing mat of claim 1 wherein said secondary binder is provided in an amount of about 15 to about 25 percent of the total weight of said base web.

17. The reinforcing mat of claim 1 wherein said base web includes glass fibers in an amount of about 25 to about 40 percent by weight, polyethylene terephthalate fibers in an amount of about 60 to about 75 percent by weight and polyvinyl alcohol in an amount of about 10 to about 5 20 percent of the total weight of the glass fibers and the polyethylene terephthalate fibers.
18. The reinforcing mat of claim 17, wherein said secondary binder is provided in an amount of about 15 to about 25 percent of the total weight 10 of said base web.
19. The reinforcing mat of claim 18 wherein said polyvinyl alcohol is in a fiber form having a diameter of about 6 to about 20 microns and a length of about 4 to about 12 mm.
- 15 20. The reinforcing mat of claim 19 wherein said polyvinyl alcohol is in a powder form having a particle size of from about 50 to about 250 microns.